

-25-

CLAIMS

1. An interactive remote drug dose and physiologic response monitoring system in a patient wherein at least one IMD is adapted to communicate with a drug delivery device, the monitoring system comprising:
 - a drug delivery device; and
 - an IMD in wireless communications with the drug delivery device, wherein the IMD is implanted in a patient under a prescriptive regimen to take a drug from the drug delivery device and the IMD monitors the patient's physiological signs for compliance with a prescriptive regimen, and checks drug interaction in the patient.
2. The system of claim 1, wherein the delivery device is chosen from one of the following: a pill box, a transdermal patch, a IV, an inhaler, an oral medicament dispenser, a subcutaneous implant, a drug pump, or a transcutaneous application.
3. A drug delivery monitoring system comprising:
 - means for monitoring parameters of a drug delivery device;
 - means for communicating the monitored parameters with an IMD;
 - means for processing the monitored parameters;
 - means for controlling the drug delivery device based on the processing of the sensed parameters.
4. The system of claim 3, further comprising:
 - means for sensing physiological parameters through the IMD;
 - means for processing the sensed physiological parameters relative to a drug delivered by the drug delivery system; and
 - means for controlling the drug delivery system in response to the processing of the sensed physiological parameters.

-26-

5. The system of claim 3, further comprising means for controlling a therapy delivered by the IMD based upon the means for processing the monitored parameters.
6. An implantable medical device comprising:
a microprocessor for controlling cardiac therapy parameters;
a lead for delivering electrical stimulation to cardiac tissue; and
a telemetry unit for receiving information from a drug delivery device, the information identifying whether an expected drug therapy is delivered, wherein the microprocessor varies the cardiac therapy delivery through the lead based upon the information.
7. A medical device system comprising:
an IMD;
a drug delivery device having a sensor to monitor a quantity of a prescribed drug within the drug delivery device;
a first communication link between the drug delivery device and the IMD; and
a second communication link between the drug delivery device and a remote user, wherein the drug delivery device communicates with the remote user to request a refill of the prescribed drug.
8. The medical device system of claim 1, wherein the remote user is a pharmacy.
9. The medical device system of claim 8, wherein the IMD includes patient specific identification information that is communicated to the pharmacy with the request to refill the prescribed drug to identify the patient.

-27-

10. The medical device system of claim 7, wherein the second communication link is a link between the IMD and the remote user so that information communicated from the drug delivery device to the IMD is then communicated to the remote user.

11. The medical device system of claim 7, wherein the remote user is a nursing station in a medical facility.

12. A method of interfacing an implantable medical device (IMD) and a drug delivery device comprising:

receiving within the IMD a communication from the drug delivery device relating to a drug therapy;

determining if the communication requires a response from the IMD;

selecting one or more responses to the communication when it is determined that the communication requires a response, wherein the possible responses include;

- (a) adjusting a therapy delivered by the IMD;
- (b) notifying the patient;
- (c) alerting a remote user; and
- (d) communicating instructions to the drug delivery device.

13. The method of claim 12, wherein the communication from the drug delivery device is an indication that a dosage has been taken.

14. The method of claim 13, wherein determining if the communication requires a response includes monitoring the effectiveness of the drug therapy.

15. The method of claim wherein monitoring the effectiveness includes sensing physical parameters within a patient by the IMD.

-28-

16. The method of claim 12, wherein the communication from the drug delivery device is an indication that an expected dosage has not been taken.
17. The method of claim 16, wherein the communication is the absence of a received message by the IMD from the drug delivery device during an expected time period.
18. The method of claim 12, wherein the communication from the drug delivery device to the IMD is routed through a communications device.
19. The method of claim 18, wherein the communications device is a programmer.
20. The method of claim 18, wherein the communication device is selected from the group consisting of: a watch, a pager, a cellular phone, a PDA, a telephone, or a personal computer.
21. The method of claim 12, wherein determining if the communication requires a response occurs in a communication device external to and in communication with the IMD.
22. The method of claim 21, wherein the communication device is a programmer.
23. The method of claim 12, wherein instructing the drug delivery device causes a changing of a dosage of a drug delivered by the drug delivered device.
24. The method of claim 12, wherein instructing the drug delivery device causes a changing of a drug delivered by the drug delivery device.

-29-

25. The method of claim 12, wherein instructing the drug delivery device causes the drug delivery device to grant access to a drug contained within the drug delivery device.

26. The method of claim 12, wherein instructing the drug delivery device causes the drug delivery device to deny access to a drug contained within the drug delivery device.

27. The method of claim 12, wherein instructing the drug delivery device causes the drug delivery device to cease delivery of a drug.

28. The method of claim 12, wherein instructing the drug delivery device causes the drug delivery device to alter a rate at which a drug is dispensed from the drug delivery device.

29. The method of claim 12, wherein instructing the drug delivery device causes the drug delivery device to alter a frequency at which a drug is dispensed from the drug delivery device.

30. A method of interfacing an implantable medical device (IMD) and a drug delivery device comprising:

receiving within the IMD a communication from the drug delivery device relating to a drug therapy; and

communicating instructions to the drug delivery device.

31. The method of claim 30, wherein the communication from the drug delivery device is an indication that a dosage has been taken.

32. The method of claim 30, wherein the communication from the drug delivery device is an indication that an expected dosage has not been taken.

-30-

33. The method of claim 32, wherein the communication is the absence of a received message by the IMD from the drug delivery device during an expected time period.
34. The method of claim 30, wherein instructing the drug delivery device causes a changing of a dosage of a drug delivered by the drug delivered device.
35. The method of claim 30, wherein instructing the drug delivery device causes a changing of a drug delivered by the drug delivery device.
36. The method of claim 30, wherein instructing the drug delivery device causes the drug delivery device to granting access to a drug contained within the drug delivery device.
37. The method of claim 30, wherein instructing the drug delivery device causes the drug delivery device to deny access to a drug contained within the drug delivery device.
38. The method of claim 30, wherein instructing the drug delivery device causes the drug delivery device to cease delivery of a drug.
39. The method of claim 30, wherein instructing the drug delivery device causes the drug delivery device to alter a rate at which a drug is dispensed from the drug delivery device.
40. The method of claim 30, wherein instructing the drug delivery device causes the drug delivery device to alter a frequency at which a drug is dispensed from the drug delivery device.